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\*Admitted only in Maryland  
\*Admitted only in Virginia  
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Federal Agencies

July 31, 2003

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Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

**Mail Stop Patent Application**

Re: U.S. Non-Provisional Utility Patent Application under 37 C.F.R. § 1.53(b)  
Appl. No. *to be assigned*; Filed: July 31, 2003  
For: **Using Time and/or Power Modulation to Achieve Dose Gray-Scaling  
in Optical Maskless Lithography**  
Inventors: Wenceslao A. Cebuhar *et al.*  
Our Ref: 1857.1650000



Sir:

The following documents are forwarded herewith for appropriate action by the U.S.  
Patent and Trademark Office:

1. PTO Fee Transmittal (Form PTO/SB/17);
2. PTO Utility Patent Application Transmittal (Form PTO/SB/05);
3. U.S. Utility Patent Application entitled:

**Using Time and/or Power Modulation to Achieve Dose  
Gray-Scaling in Optical Maskless Lithography**

and naming as inventors:

Wenceslao A. Cebuhar;  
Jason D. Hintersteiner;  
Azat Latypov; and  
Gerald Volpe

the application consisting of:

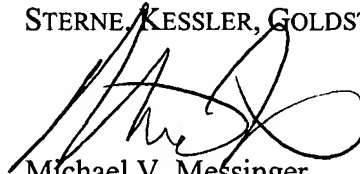
- a. An Application Data Sheet (37 C.F.R. § 1.76);
  - b. A copy of the original executed Declaration;
  - c. A specification containing:
    - i. 14 pages of description prior to the claims;
    - ii. 5 pages of claims (21 claims - 5 independent claims);
    - iii. a one (1) page abstract; and
  - d. 12 sheets of drawings: (Figures 1-12 );
4. Authorization to Treat a Reply As Incorporating An Extension of Time Under 37 C.F.R. § 1.136(a)(3);
  5. Recordation Form Cover Sheet;
  6. A copy of the original executed Assignment to ASML Holding N.V., recordation of which is hereby respectfully requested;
  7. Form PTO-2038 Credit Card Payment Form for \$ 976.00 to cover:
    - \$ 750.00 Filing fee for patent application;
    - \$ 40.00 Assignment recordation fee(s); and
    - \$ 186.00 Fee for excess claims; and
  8. Two (2) return postcards.

Commissioner for Patents  
July 31, 2003  
Page 3

It is respectfully requested that, of the two attached postcards, one be stamped with the filing date of these documents and returned to our courier, and the other, prepaid postcard, be stamped with the filing date and unofficial application number and returned as soon as possible. The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read 'Michael V. Messinger', written over the printed name.

Michael V. Messinger  
Attorney for Applicants  
Registration No. 37,575

::ODMAMHODMA\SKGF\_DC1;162647;1  
SKGF Rev. 2/12/02 dcw; 9/5/02 mac; 4/29/03 svb

**FEE TRANSMITTAL**  
**for FY 2003**

Patent fees are subject to annual revision.

Applicant claims small entity status. See 37 CFR 1.27

**TOTAL AMOUNT OF PAYMENT (\$)**976.00**Complete if Known**

Application Number	t b assign d
Filing Date	July 31, 2003
First Named Inventor	W nceslao A. Cebuhar
Examiner Name	t b assigned
Art Unit	to be assigned
Attorney Docket No.	1857.1650000

**METHOD OF PAYMENT (check all that apply)**

☐ Check ☒ Credit card ☐ Money Order ☒ Other\*\* ☐ None  
 \*\* Charge any deficiencies or credit any overpayments in the fees or fee calculations of Parts 1, 2 and 3 below to Deposit Account No. 19-0036.

☐ Deposit Account  
 Deposit Account Number 19-0036

Deposit Account Name: Sterne, Kessler, Goldstein &amp; Fox P.L.L.C.

The Commissioner is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Credit any over payments  
☐ Charge any additional fee(s) during the pendency of this application  
☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1001	750	2001	375	Utility filing fee	\$750.00
1002	330	2002	165	Design filing fee	
1003	520	2003	260	Plant filing fee	
1004	750	2004	375	Reissue filing fee	
1105	160	2005	80	Provisional filing fee	

**SUBTOTAL (1) (\$)**750.00**2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE**

Extra	Fee from below	Fee Paid
Total Claims 21 - 20** = 1	X \$18.00	= \$18.00
Indep. Claims 5 - 3** = 2	X \$84.00	= \$168.00
Multiple Dependent		=

Large Entity Fee Code	Small Entity Fee Code	Fee (\$)	Fee (\$)	Fee Description
1202	2202	18	9	Claims in excess of 20
1201	2201	84	42	Independent claims in excess of 3
1203	2203	280	140	Multiple dependent claim, if not paid
1204	2204	84	42	**Reissue independent claims over original patent
1205	2205	18	9	**Reissue claims in excess of 20 and over original patent

**SUBTOTAL (2) (\$)**186.00

\*\*or number previously paid, if greater; For Reissue, see above

**FEE CALCULATION (continued)****3. ADDITIONAL FEES**

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1502	50	2052	25	Surcharge-late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	410	2252	205	Extension for reply within second month	
1253	930	2253	465	Extension for reply within third month	
1254	1,450	2254	725	Extension for reply within fourth month	
1255	1,970	2255	985	Extension for reply within fifth month	
1401	320	2401	160	Notice of Appeal	
1402	320	2402	160	Filing a brief in support of an appeal	
1403	280	2403	140	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,300	2453	650	Petition to revive - unintentional	
1501	1,300	2501	650	Utility issue fee (or reissue)	
1502	470	2502	235	Design issue fee	
1503	630	2503	315	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	\$40.00
1809	750	2809	375	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	750	2810	375	For each additional invention to be examined (37 CFR 1.129(b))	
1801	750	2801	375	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify) \_\_\_\_\_

\* Reduced by Basic Filing Fee Paid

**SUBTOTAL (3) (\$)**40.00**SUBMITTED BY**

Complete (if applicable)

Name (Print/Type)	Michael V. Messinger	Registration No. (Attorney/Agent)	37,575	Telephone	202-371-2600
Signature				Date	July 31, 2003

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, O.P. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

SKGF\_DC1:162678.1

**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR § 1.53(b))

Attorney Docket No.	1857.1650000
First Inventor	Wenceslao A. Cebuhar
Title	Using Time and/or Power Modulation to Achieve Dose Gray-Scaling in Optical Maskless Lithography
Express Mail Label No.	

**APPLICATION ELEMENTS**  
See MPEP chapter 600 concerning utility patent application contents.**ADDRESS TO:**Commissioner for Patents  
Mail Stop Patent Application  
P.O. Box 1450  
Alexandria VA 22313-1450

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original, and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 20]  
(preferred arrangement set forth below)
  - Descriptive title of the Invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 12]
5. Oath or Declaration [Total Pages 3]
  - a. ☒ Newly executed (original or copy)
  - b. ☐ Copy from a prior application (37 CFR 1.63(d))  
(for continuation/divisional with Box 18 completed)
    - i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR §§ 1.63(d)(2) and 1.33(b).
6. ☒ Application Data Sheet. See 37 CFR 1.76.

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program  
(Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission  
(if applicable, all necessary)
  - a. ☐ Computer Readable Form (CRF)
  - b. Specification Sequence Listing on:
    - i. ☐ CD-ROM or CD-R (2 copies); or
    - ii. ☐ paper
  - c. ☐ Statements verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement ☐ Power of Attorney  
(when there is an assignee)
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcards (MPEP 503)  
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☒ Other: Authorization under 37 C.F.R. § 1.136(a)(3)  
☒ Other: The name of the assignee is: ASML Holding N.V.

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-Part (CIP) of prior application No: \_\_\_\_/  
Prior application information: Examiner \_\_\_\_\_ Group/Art Unit: \_\_\_\_\_

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**19. CORRESPONDENCE ADDRESS**☒ Customer Number 26111or ☐ Correspondence address below

NAME	STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.			
	Attorneys at Law			
ADDRESS				
CITY		STATE		ZIP CODE
COUNTRY		TELEPHONE		FAX

NAME (Print/Type)	Michael V. Messinger	Registration No. (Attorney/Agent)	37,575
SIGNATURE		Date	July 31, 2003

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you are required to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

SKGF Rev 5/16/03 mac #162623v1&lt;SKGF\_DC1&gt; -Non-Prov Appln.wpd

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



In re application of:

Wenceslao A. Cebuhar *et al.*

Appl. No. *to be assigned*

Filed: July 31, 2003

For: **Using Time and/or Power Modulation to  
Achieve Dose Gray-Scaling in Optical  
Maskless Lithography**

Confirmation No. *to be assigned*

Art Unit: *to be assigned*

Examiner: *to be assigned*

Atty. Docket: 1857.1650000

**Authorization To Treat A Reply As Incorporating An Extension Of  
Time Under 37 C.F.R. § 1.136(a)(3)**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

The U.S. Patent and Trademark Office is hereby authorized to treat any concurrent or future reply that requires a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. The U.S. Patent and Trademark Office is hereby authorized to charge all required extension of time fees to our Deposit Account No. 19-0036, if such fees are not otherwise provided for in such reply.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Michael V. Messinger  
Attorney for Applicants  
Registration No. 37,575

Date: July 31, 2003

1100 New York Avenue, N.W.  
Washington, D.C. 20005-3934  
(202) 371-2600

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SKGF 1/25/02 mac; 4/18/03 svb